

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re: Reissue Application of
CHANG, Ming Yu

Assignee: Calico Brands, Inc.

Application No. 09/844,564
Filing Date: 04/27/2001

Based on U.S. Patent 5,897,307
Issue Date: 4/27/1999
Prior Filing Date: 6/24/1997

Title: **Disposable Lighter Having a Safety Function
of Preventing Unwanted Ignition**

Examiner: Sucrth, Sarah Elizabeth

Art Unit 3749
Conf. No. 1790

Attorney Docket No. 01-03-1627

DECLARATION OF KIL YONG SUNG

I, the undersigned Kil Yong Sung, do hereby declare that:

1. I am a technical designer of utility and cigarette lighters, with more than ten years of experience in developing child-safety mechanisms for lighters. I am also a named inventor of some 17 utility patents and 10 design patents for lighters in the United States. Currently, I work as a technical advisor and designer for lighters for Calico Brands, Inc. My job responsibilities at Calico Brands, Inc. include providing advice as to and developing child-resistant mechanisms for lighters.
2. I have reviewed the Office Action dated April 28, 2009 in the above-referenced application. It is my understanding that the examiner in the Office Action rejected claims of the above-referenced application based on two references, U.S. Patent No. 5,769,625 to Sher ("Sher") and U.S. Patent No. 5,655,902 to Doucet ("Doucet").

3. I have also reviewed the Sher reference and Doucet reference that were cited by the examiner in the Office Action. The Sher reference discloses a cigarette lighter with a safety mechanism. With respect to the safety mechanism, the Sher reference teaches that a striker wheel of the cigarette lighter has an annular recessed center portion and annular unrecessed lateral portions. The Sher reference further teaches that the surfaces of annular unrecessed lateral portions of the striker wheel are smooth so that only an adult's finger (but not a child's finger) can operate the striker wheel for ignition. As stated in col. 4 lines 35-45 of the Sher reference, Sher distinguishes its lighter from prior art on the ground that the surfaces of annular unrecessed lateral portions of the striker wheel in Sher are smooth whereas the striker wheel in prior art has protuberances on the surfaces of annular unrecessed lateral portions. Further, the Sher reference teaches that the striker wheel is mounted to the lighter in slots such that the striker wheel is pressed from a first position having insufficient spring force to ignite into a second position having sufficient spring force to cause the lighter flint to spark when the striker wheel is rotated. Simply put, in order to ignite the lighter of Sher, a user must vertically move down the striker wheel as well as rotate the striker wheel.

4. It is noted that the safety mechanism of Sher is significantly different from the safety mechanism utilized in Doucet, and, as a result, the structure and operation of the lighter in Sher are different from those of the lighter in Doucet. The safety mechanism in Doucet requires a slip ring (referred as "sleeve" by the examiner), which is concentrically mounted about a striking wheel assembly, to resist undesired use of the lighter by young children. The slip ring in Doucet rotates freely about the striking wheel assembly and has an elongated channel so that the ends of the slot engage a flint housing to limit the range of motion of the slip ring. Different from Sher, Doucet teaches that the exterior surface of the slip ring is preferably serrated to provide a rough

edge for easy engagement by the user's finger. *See* col. 3 lines 34-36 of Doucet. To operate the lighter in Doucet, at least a threshold amount of pressure exerted by a finger should be applied to the slip ring which surrounds the striking wheel assembly before the striking wheel assembly can be rotated against flint to create a spark. The slip ring in Doucet rotates in either a forward or backward direction in a limited range and, in order to reactivate the striking wheel, the slip ring must be rotated in the backward direction. *See* col. 6 lines 5-29 of Doucet. A user's finger engages only the slip ring and a portion of the striking wheel in operating the lighter in Doucet.

5. Although the examiner stated that the slip ring (sleeve) surrounding the striker wheel in Doucet has the same diameter as the outer discs, I do not see such teaching in Doucet. Contrary to the examiner's statement, the slip ring of Doucet cannot have the same diameter as the outer discs because a space 41 should be provided between the slip ring and the outer discs in order to allow the slip ring to freely rotate about the outer discs. *See* Fig. 3 and col. 5 lines 33-40 of Doucet.

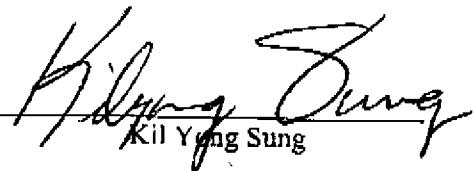
6. It is generally known in the field of lighter technology that a viable and operable safety mechanism in a lighter should prevent a child from operating the lighter but should allow an adult to easily operate it. Also, the structure of the safety mechanism should be simple to maintain the size of a cigarette lighter to be small. In light of the different structures and operations of the two different safety mechanisms of Sher and Doucet, a person of ordinary skill in the field would not have had any motive to modify the safety mechanism of Sher to include the slip ring of Doucet. A person of ordinary skill in the field would have thought that such modification would be unsuccessful because it would destroy the functionality of the lighter of Sher for its own purpose. For example, a person of ordinary skill in the field would have thought that if such a slip ring as in Doucet were to be installed in the lighter of Sher, it would obstruct

operation of the lighter of Sher and would add improper and unnecessary difficulty in rotating the sparker wheel of Sher because the range of motion of the slip ring (which is supposed to rotate freely about the sparker wheel of Sher) would not be properly limited in the lighter of Sher while the sparker wheel of Sher is vertically moving from one position to another. Moreover, the closed surface portion of the slip ring (where an elongated slot is not formed) could be located between the sparker wheel and a flint of Sher such that the closed surface of the slip ring itself, rather than the sparker wheel, could frictionally engage the flint to ignite, resulting in a lighter being easily operable by a child.

I hereby declare that all statements made herein are to the best of my knowledge and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made may jeopardize the validity of any patent issued from the U.S. Reissue Patent Application No. 09/844,564.

Date: October 22, 2009

Signature:


Kil Yung Sung